This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): ~~Axial~~ A compressor selected from the group consisting of an axial piston compressor, ~~especially a~~ and an axial piston compressor for the air-conditioning system of a motor vehicle, said compressor having a housing and, ~~for drawing~~ operative to draw in and compress~~ing~~ a coolant, a compressor unit arranged in the housing and driven by means of a drive shaft ~~(104)~~, the compressor unit comprising pistons ~~(118), which~~ operative to move axially back and forth in a cylinder block, and a tilt plate, ~~(~~swash plate or wobble plate; or tilt ring ~~(107) which drives the~~ operative to drive said pistons and ~~rotates~~ to rotate together with ~~the~~ said drive shaft ~~(104)~~, wherein:

~~characterised in that~~

the geometry and dimensioning of all parts moved in translation, such as axial pistons ~~(118)~~, piston rods or sliding blocks ~~(121, 122)~~ or the like, on the one hand, and all parts moved in rotation, such as the tilt plate ~~(107)~~, members for conjoint movement or the like, on the other hand, are such that, for angles selected from the group consisting of any desired tilt angles ~~(α)~~ of the tilt plate ~~(107), especially~~ and between a predetermined minimum tilt angle ~~(α_{min})~~ and a predetermined maximum tilt angle ~~(α_{max})~~, the moment ~~$M_{k,ges}$~~ due to integers selected from the group consisting of the masses moved in translation, ~~especially that~~ that masses of the pistons ~~(118)~~, where appropriate including sliding blocks ~~(121, 122)~~, piston rods or the like, is approximately equal to the moment ~~M_{sw}~~ due to the moment of deviation, that is to say the moment due to the mass inertia of the tilt plate ~~(107)~~.

Claim 2 (currently amended): ~~Compressor~~ A compressor according to claim 1, ~~characterised in that~~ wherein the balancing of moments ~~$M_{k,ges} = M_{sw}$~~ is set for ~~a predetermined tilt~~ an angle ~~(α), especially for~~ selected from the ~~following~~ group

consisting of a predetermined tile angle, a tilt ~~angles:~~ angle $\alpha = (\alpha_{max} - \alpha_{min})/2$, ~~or~~ $\alpha = \alpha_{max}$, ~~or even~~ and a predetermined virtual tilt angle $\alpha > \alpha_{max}$.

Claim 3 (currently amended): ~~Compressor~~ A compressor according to claim 1 ~~or 2~~, ~~characterised in that~~ wherein the centre of gravity of the tilt plate ~~(107)~~ is located on the tilt axis ~~(x)~~ thereof.

Claim 4 (currently amended): ~~Compressor~~ A compressor according to claim 1 ~~or 2~~, ~~characterised in that,~~ wherein given division of the space surrounding the drive shaft and the tilt plate into four quadrants ~~(Q1, Q2, Q3, Q4)~~, the centre of gravity of the tilt plate ~~(107)~~ is offset ~~either~~ into a quadrant selected from the group consisting of a first, front quadrant (Q1) delimited by the drive shaft ~~(104)~~ and the front face of the tilt plate ~~(107)~~ including the piston support and facing the pistons, ~~or into~~ a second, front quadrant ~~(Q2)~~ located on the side opposite the first quadrant ~~(Q1)~~ relative to the drive shaft ~~(104)~~, ~~or into~~ a third, rear quadrant ~~(Q3)~~ arranged relative to the tilt plate ~~(107)~~ at the height of the second quadrant ~~(Q2)~~ behind the tilt plate ~~(107)~~, that is to say on that side of the tilt plate ~~(107)~~ which is remote from the pistons, ~~or into~~ and a fourth, rear quadrant ~~(Q4)~~ arranged relative to the tilt plate ~~(107)~~ at the height of the first quadrant ~~(Q1)~~ behind the tilt plate ~~(107)~~, that is to say on that side of the tilt plate ~~(107)~~ which is remote from the pistons.

Claim 5 (currently amended): ~~Compressor~~ A compressor according to ~~one of claims~~ claim 1 ~~–~~ 4, ~~characterised in that it~~ said compressor is down-regulatable in the relatively high speed of rotation range and up-regulatable in the relatively low speed of rotation range ~~(Figs. 15a, 16, 17, 18)~~.

Claim 6 (currently amended): ~~Compressor~~ A compressor according to claim 4 ~~or 5~~, ~~characterised in~~ wherein the arrangement is such that the location of the centre of

gravity moves, with a change in the tilt angle of the tilt plate ~~(107)~~, from an up-regulating quadrant ~~(Q2, Q4)~~ into a down-regulating quadrant ~~(Q1, Q3)~~ or vice-versa.

Claim 7 (currently amended): ~~Compressor~~ A compressor according to ~~one of claims~~ claim 1, ~~to 6, characterised in that~~ wherein an integer selected from the group consisting of the piston stroke, ~~and/or~~ the tilt angle of the tilt plate ~~(107)~~, and the piston stroke and the tilt angle of the tile plate is substantially constant in the case of changes in the speed of rotation.

Claim 8 (currently amended): ~~Compressor~~ A compressor according to ~~one of claims~~ claim 1 ~~to 7~~, ~~characterised in that~~ wherein the speed-of-rotation-dependent characteristic curves of the drive mechanism chamber pressure difference ~~(p)~~, relative to the suction pressure, set against the tilt angle ~~(α)~~ of the tilt plate ~~(107) either intersect~~ have a relationship selected from the group consisting of intersecting at one point, ~~or converge~~ and converging at one point.

Claim 9 (currently amended): ~~Compressor~~ A compressor according to claim 8, ~~characterised in that~~ wherein the point of intersection of the characteristic curves separates the up-regulating from the down-regulating speed of rotation range.

Claim 10 (currently amended): ~~Compressor~~ A compressor according to ~~one of claims~~ claim 1 ~~to 9~~, ~~characterised in that~~ wherein the characteristic curves (regulation curves) for different speeds of rotation run approximately parallel to one another.

Claim 11 (currently amended): ~~Compressor~~ A compressor according to ~~one of claims~~ claim 1 ~~to 10~~, ~~characterised in that~~ wherein the tilt angle ~~(α)~~ of the tilt plate ~~(for example,~~ or tilt ring ~~107)~~ changes by about 2° to 4° in the event of a change in the speed of rotation from minimum to maximum, especially under the condition of an approximately constant pressure in the drive mechanism chamber.

Claim 12 (currently amended): ~~Compressor~~ A compressor according to ~~one of claims~~ claim 1 ~~to 11~~, ~~characterised in that~~ wherein the spring constant of ~~the~~ a restoring spring ~~(117)~~ acting on the tilt plate ~~(for example, the~~ or tilt ring ~~107)~~ is selected from the group consisting of between about 40 and 90 N/mm, ~~especially~~ and of between about 40 ~~to~~ and 70 N/mm, the selected spring constant having been optimised for a group of regulation characteristic curves.

Claim 13 (currently amended): ~~Compressor~~ A compressor according to ~~one of claims~~ claim 1 ~~to 12~~, ~~characterised in that~~ wherein the moment of deviation, taking into account a so-called Steiner component, includes both an up-regulating and a down-regulating term, those terms predominating, in each case, after a threshold tilt angle ~~(α_G)~~ of the tilt plate ~~(107)~~ has been exceeded, especially, in the case of

$\alpha < \alpha_G$ in up-regulating manner, and

$\alpha > \alpha_G$ in down-regulating manner.